RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: 10/560,470
Source: IFWP
Date Processed by STIC: 12/28/2005

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IFW?

RAW SEQUENCE LISTING DATE: 12/28/2005
PATENT APPLICATION: **US/10/560,470** TIME: 12:42:59

Input Set : **A:\Lannigan.00910-05.txt**
Output Set: **N:\CRF4\12282005\J560470.raw**

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      3 <110> APPLICANT: University of Virginia Patent Foundation
      4       Lannigan-Macara, Deborah A.
      5       Henrich, Lorin M.
      6       Smith, Jeffrey A.
      8 <120> TITLE OF INVENTION: ERK7 and ERK8, Novel Diagnostic Markers for Cancer
     10 <130> FILE REFERENCE: 00910-05
C--> 12 <140> CURRENT APPLICATION NUMBER: US/10/560,470
C--> 12 <141> CURRENT FILING DATE: 2005-12-14
     12 <150> PRIOR APPLICATION NUMBER: US 60478,992
     13 <151> PRIOR FILING DATE: 2003-06-17
     15 <150> PRIOR APPLICATION NUMBER: PCT/US2004/019181
     16 <151> PRIOR FILING DATE: 2004-06-17
     18 <160> NUMBER OF SEQ ID NOS: 6
     20 <170> SOFTWARE: PatentIn version 3.1
     22 <210> SEQ ID NO: 1
     23 <211> LENGTH: 484
     24 <212> TYPE: PRT
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     34             20                  25                  30
     37 Arg Arg Thr Gly Glu Val Val Ala Ile Lys Lys Ile Phe Asp Ala Phe
     38         35                  40                  45
     41 Arg Asp Lys Thr Asp Ala Gln Arg Thr Phe Arg Glu Ile Thr Leu Leu
     42     50                  55                  60
     45 Gln Glu Phe Gly Asp His Pro Asn Ile Ile Ser Leu Leu Asp Val Ile
     46 65                  70                  75                  80
     49 Arg Ala Glu Asn Asp Arg Asp Ile Tyr Leu Val Phe Glu Phe Met Asp
     50                 85                  90                  95
     53 Thr Asp Leu Asn Ala Val Ile Arg Lys Gly Gly Leu Leu Gln Asp Val
     54             100                 105                 110
     57 His Val Arg Ser Ile Phe Tyr Gln Leu Leu Arg Ala Thr Arg Phe Leu
     58         115                 120                 125
     61 His Ser Gly His Val Val His Arg Asp Gln Lys Pro Ser Asn Val Leu
     62     130                 135                 140
     65 Leu Asp Ala Asn Cys Thr Val Lys Leu Cys Asp Phe Gly Leu Ala Arg
     66 145                 150                 155                 160
     69 Ser Leu Gly Asp Leu Pro Glu Gly Pro Glu Asp Gln Ala Val Thr Glu
     70                 165                 170                 175
     73 Tyr Val Ala Glu Asp Leu Leu Ala Leu Gly Ser Gly Cys Arg Ala Ser
     74             180                 185                 190
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81 Leu Pro Pro Asp Thr Ser Pro Glu Ala Leu Asp Leu Leu Arg Arg Leu
82     210                 215                 220
85 Leu Val Phe Ala Pro Asp Lys Arg Leu Ser Ala Thr Gln Ala Leu Gln
86 225                 230                 235                 240
89 His Pro Tyr Val Gln Arg Phe His Cys Pro Ser Asp Glu Trp Ala Arg
90                 245                 250                 255
93 Glu Ala Asp Val Arg Pro Arg Ala His Glu Gly Val Gln Leu Ser Val
94             260                 265                 270
97 Pro Glu Tyr Arg Ser Arg Val Tyr Gln Met Ile Leu Glu Cys Gly Gly
98         275                 280                 285
101 Ser Ser Gly Thr Ser Arg Glu Lys Gly Pro Glu Gly Val Ser Pro Ser
102     290                 295                 300
105 Gln Ala His Leu His Lys Pro Arg Ala Asp Pro Gln Leu Pro Ser Arg
106 305                 310                 315                 320
109 Thr Pro Val Gln Gly Pro Arg Pro Arg Pro Gln Ser Ser Pro Gly His
110                 325                 330                 335
113 Asp Pro Ala Glu His Glu Ser Pro Arg Ala Ala Lys Asn Val Pro Arg
114             340                 345                 350
117 Gln Asn Ser Ala Pro Leu Leu Gln Thr Ala Leu Leu Gly Asn Gly Glu
118         355                 360                 365
121 Arg Pro Pro Gly Ala Lys Glu Ala Pro Pro Leu Thr Leu Ser Leu Val
122     370                 375                 380
125 Lys Pro Ser Gly Arg Gly Ala Ala Pro Ser Leu Thr Ser Gln Ala Ala
126 385                 390                 395                 400
129 Ala Gln Val Ala Asn Gln Ala Leu Ile Arg Gly Asp Trp Asn Arg Gly
130                 405                 410                 415
133 Gly Gly Val Arg Val Ala Ser Val Gln Gln Val Pro Pro Arg Leu Pro
134             420                 425                 430
137 Pro Glu Ala Arg Pro Gly Arg Arg Met Phe Ser Thr Ser Ala Leu Gln
138         435                 440                 445
141 Gly Ala Gln Gly Gly Ala Arg Ala Leu Leu Gly Gly Tyr Ser Gln Ala
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168 Asp Arg Arg Thr Gly Glu Val Val Ala Ile Lys Lys Ile Phe Asp Ala
169         35                  40                  45
172 Phe Arg Asp Gln Thr Asp Ala Gln Arg Thr Phe Arg Glu Ile Met Leu
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Input Set : **A:\Lannigan.00910-05.txt**
Output Set: **N:\CRF4\12282005\J560470.raw**

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176 Leu Arg Glu Phe Gly Gly His Pro Asn Ile Ile Arg Leu Leu Asp Val
177 65                  70                  75                  80
180 Ile Pro Ala Lys Asn Asp Arg Asp Ile Tyr Leu Val Phe Glu Ser Met
181                 85                  90                  95
184 Asp Thr Asp Leu Asn Ala Val Ile Gln Lys Gly Arg Leu Leu Glu Asp
185             100                 105                 110
188 Ile His Lys Arg Cys Ile Phe Tyr Gln Leu Leu Arg Ala Thr Lys Phe
189         115                 120                 125
192 Ile His Ser Gly Arg Val Ile His Arg Asp Gln Lys Pro Ala Asn Val
193     130                 135                 140
196 Leu Leu Asp Ala Ala Cys Arg Val Lys Leu Cys Asp Phe Gly Leu Ala
197 145                 150                 155                 160
200 Arg Ser Leu Ser Asp Phe Pro Glu Gly Pro Gly Gly Gln Ala Leu Thr
201                 165                 170                 175
204 Glu Tyr Val Ala Thr Arg Trp Tyr Arg Ala Pro Glu Val Leu Leu Ser
205             180                 185                 190
208 Ser Arg Trp Tyr Thr Pro Gly Val Asp Met Trp Ser Leu Gly Cys Ile
209         195                 200                 205
212 Leu Gly Glu Met Leu Arg Gly Gln Pro Leu Phe Pro Gly Thr Ser Thr
213     210                 215                 220
216 Phe His Gln Leu Glu Leu Ile Leu Glu Thr Ile Pro Leu Pro Ser Met
217 225                 230                 235                 240
220 Glu Glu Leu Gln Gly Leu Gly Ser Asp Tyr Ser Ala Leu Ile Leu Gln
221                 245                 250                 255
224 Asn Leu Gly Ser Arg Pro Arg Gln Thr Leu Asp Ala Leu Leu Pro Pro
225             260                 265                 270
228 Asp Thr Pro Pro Glu Ala Leu Asp Leu Leu Lys Arg Leu Leu Ala Phe
229         275                 280                 285
232 Ala Pro Asp Lys Arg Leu Ser Ala Glu Gln Ala Leu Gln His Pro Tyr
233     290                 295                 300
236 Val Gln Arg Phe His Cys Pro Asp Arg Glu Trp Thr Arg Gly Ser Asp
237 305                 310                 315                 320
240 Val Arg Leu Pro Val His Glu Gly Asp Gln Leu Ser Ala Pro Glu Tyr
241                 325                 330                 335
244 Arg Asn Arg Leu Tyr Gln Met Ile Leu Glu Arg Arg Arg Asn Ser Arg
245             340                 345                 350
248 Ser Pro Arg Glu Glu Asp Leu Gly Val Val Ala Ser Arg Ala Glu Leu
249         355                 360                 365
252 Arg Ala Ser Gln Arg Gln Ser Leu Lys Pro Gly Val Leu Pro Gln Val
253     370                 375                 380
256 Leu Ala Glu Thr Pro Ala Arg Lys Arg Gly Pro Lys Pro Gln Asn Gly
257 385                 390                 395                 400
260 His Gly His Asp Pro Glu His Val Glu Val Arg Arg Gln Ser Ser Asp
261                 405                 410                 415
264 Pro Leu Tyr Gln Leu Pro Pro Pro Gly Ser Gly Glu Arg Pro Pro Gly
265             420                 425                 430
268 Ala Thr Gly Glu Pro Pro Ser Ala Pro Ser Gly Val Lys Thr His Val
269         435                 440                 445
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PATENT APPLICATION: **US/10/560,470** TIME: 12:42:59

Input Set : **A:\Lannigan.00910-05.txt**
Output Set: **N:\CRF4\12282005\J560470.raw**

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276 Asn Gln Pro Leu Ile Arg Ser Asp Pro Ala Arg Gly Gly Gly Pro Arg
277 465                 470                 475                 480
280 Ala Val Gly Ala Arg Arg Val Pro Ser Arg Leu Pro Arg Glu Ala Pro
281                 485                 490                 495
284 Glu Pro Arg Pro Gly Arg Arg Met Phe Gly Ile Ser Val Ser Gln Gly
285             500                 505                 510
288 Ala Gln Gly Ala Ala Arg Ala Ala Leu Gly Gly Tyr Ser Gln Ala Tyr
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308 1               5                   10                  15
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312             20                  25                  30
315 Asp Arg Arg Thr Gly Glu Val Val Ala Ile Lys Lys Ile Phe Asp Ala
316         35                  40                  45
319 Phe Arg Asp Gln Ile Asp Ala Gln Arg Thr Phe Arg Glu Ile Met Leu
320     50                  55                  60
323 Leu Lys Glu Phe Gly Gly His Pro Asn Ile Ile Arg Leu Leu Asp Val
324 65                  70                  75                  80
327 Ile Pro Ala Lys Asn Asp Arg Asp Ile Tyr Leu Val Phe Glu Ser Met
328                 85                  90                  95
331 Asp Thr Asp Leu Asn Ala Val Ile Gln Lys Gly Arg Leu Leu Lys Asp
332             100                 105                 110
335 Ile His Lys Arg Cys Ile Phe Tyr Gln Leu Leu Arg Ala Thr Lys Phe
336         115                 120                 125
339 Ile His Ser Gly Arg Val Ile His Arg Asp Gln Lys Pro Ala Asn Val
340     130                 135                 140
343 Leu Leu Asp Ser Ala Cys Arg Val Lys Leu Cys Asp Phe Gly Leu Ala
344 145                 150                 155                 160
347 Arg Ser Leu Gly Asp Leu Pro Glu Gly Pro Gly Gly Gln Ala Leu Thr
348                 165                 170                 175
351 Glu Tyr Val Ala Thr Arg Trp Tyr Arg Ala Pro Glu Val Leu Leu Ser
352             180                 185                 190
355 Ser Arg Trp Tyr Thr Pro Gly Val Asp Met Trp Ser Leu Gly Cys Ile
356         195                 200                 205
359 Leu Gly Glu Met Leu Arg Gly Gln Pro Leu Phe Pro Gly Thr Ser Thr
360     210                 215                 220
363 Phe His Gln Leu Glu Leu Ile Leu Lys Thr Ile Pro Leu Pro Ser Met
364 225                 230                 235                 240
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PATENT APPLICATION: US/10/560,470 TIME: 12:42:59

Input Set : A:\Lannigan.00910-05.txt
Output Set: N:\CRF4\12282005\J560470.raw

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367 Glu Glu Leu Gln Asp Leu Gly Ser Asp Tyr Ser Ala Leu Ile Leu Gln
368                 245                 250                 255
371 Asn Leu Gly Ser Arg Pro Gln Gln Thr Leu Asp Ala Leu Leu Pro Pro
372             260                 265                 270
375 Asp Thr Pro Pro Glu Ala Leu Asp Leu Leu Lys Arg Leu Leu Ala Phe
376         275                 280                 285
379 Ala Pro Asp Lys Arg Leu Ser Ala Glu Gln Ala Leu Gln His Pro Tyr
380     290                 295                 300
383 Val Gln Arg Phe His Cys Pro Asp Arg Glu Trp Ala Arg Glu Ser Asp
384 305                 310                 315                 320
387 Val Arg Leu Pro Val His Glu Gly Asp Gln Leu Ser Ala Pro Glu Tyr
388                 325                 330                 335
391 Arg Lys Arg Leu Tyr Gln Ile Ile Leu Glu Gln Ser Gly Asn Ser Arg
392             340                 345                 350
395 Ser Pro Arg Glu Glu Gly Leu Gly Val Val Ala Ser Arg Ala Glu Leu
396         355                 360                 365
399 Arg Ala Ser Pro Ala Arg Thr Gln Ser Leu Lys Ser Gly Val Leu Pro
400     370                 375                 380
403 Gln Val Pro Ala Glu Thr Pro Ala Arg Lys Arg Gly Pro Lys Pro Pro
404 385                 390                 395                 400
407 Arg Ser Pro Gly His Asp Pro Glu His Val Glu Val Arg Arg Gln Ser
408                 405                 410                 415
411 Ser Asp Pro Leu Phe Gln Leu Pro Pro Pro Gly Arg Gly Glu Arg Pro
412             420                 425                 430
415 Pro Gly Ala Thr Gly Gln Pro Pro Ser Ala Pro Ser Gly Val Lys Thr
416         435                 440                 445
419 Gln Val Arg Ala Met Ala Pro Ser Leu Thr Ser Gln Ala Glu Ala Gln
420     450                 455                 460
423 Ala Ala Asn Gln Ala Leu Ile Arg Ser Asp Pro Ala Arg Gly Gly Gly
424 465                 470                 475                 480
427 Pro Arg Ala Val Gly Ala Arg Arg Val Pro Ser Arg Leu Pro Arg Glu
428                 485                 490                 495
431 Ala Pro Glu Pro Arg Pro Gly Arg Arg Met Phe Gly Ile Ser Val Ser
432             500                 505                 510
435 Gln Gly Ala Gln Gly Ala Ala Arg Ala Ala Leu Gly Gly Tyr Ser Gln
436         515                 520                 525
439 Ala Tyr Gly Thr Val Cys Arg Ser Ala Leu Gly Arg Leu Pro Leu Leu
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443 Pro Gly Pro Arg Ala
444 545
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449 <212> TYPE: PRT
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459 <211> LENGTH: 7
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VERIFICATION SUMMARY DATE: 12/28/2005
PATENT APPLICATION: **US/10/560,470** TIME: 12:43:00

Input Set : **A:\Lannigan.00910-05.txt**
Output Set: **N:\CRF4\12282005\J560470.raw**

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L:12 M:271 C: Current Filing Date differs, Replaced Current Filing Date